The JOURNAL *of* GEOGRAPHY

Copyright 1943, by the National Council of Geography Teachers

VOLUME XLII FEBRUARY, 1943 NUMBER 2

NATIONAL COUNCIL OF GEOGRAPHY TEACHERS

Report of Committee on Standards of Certification for the Teaching of Geography in High Schools

ALFRED H. MEYER, *Chairman*
Department of Geography and Geology
Valparaiso University, Valparaiso, Ind.

L. C. DAVIS, Department of Geography, State Teachers College, Indiana, Pa.
JOHN R. EMENS, Chairman of Personnel Committee, Board of Education, Detroit, Mich.
PRESTON E. JAMES, Department of Geography, University of Michigan, Ann Arbor, Mich.
EDWIN H. REEDER, College of Education, University of Illinois, Urbana, Ill.
GEORGE T. RENNER, Geography, Teachers College, Columbia University, New York, N.Y.
HOWARD E. WILSON, Graduate School of Education, Harvard University, Cambridge, Mass.

TO: EDUCATORS AND ADMINISTRATORS OF SECONDARY EDUCATION AND TEACHER TRAINING AND CERTIFICATION

FROM: THE HIGH SCHOOL GEOGRAPHY STANDARDS COMMITTEE OF THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS

A MEMORIAL PROPOSING THE "GEOGRAPHY MASTER STANDARDS PATTERN" AS A SOLUTION OF THE HIGH SCHOOL GEOGRAPHY TEACHER TRAINING AND CERTIFICATION PROBLEM

OUTLINE

I. The expansion of geography offerings and enrollments in secondary education calls for adequate teacher-training in geography.
II. General academic secondary certification criteria reviewed and classified as a basis for determining desirable teacher-training in geography.
  A. Classification based on general academic and professional standards.
  B. Classification based on teacher-training requirements in the social studies.
III. The proposed "Geography Master Standards Pattern" as a suggestive national guide to desirable secondary teacher-training requirements in geography.
  Application of the "standards" pattern.
  Using as a basis certification classification "A"—General academic-professional.
  Using as a basis certification classification "B"—Social studies.
IV. The special case of geographic education under a "commerce" license.
V. The Geography Master Standards Pattern is formulated and supported on the three theses that:

A. Successful teaching of geography presupposes a comprehension of its philosophy and ideologies.

B. Successful teaching of geography calls for a knowledge of its scientific principles.

C. Finally, successful teaching of geography depends upon adequate training in the art of thinking and teaching "geographically."

Map training the key to successful geographic regional analysis and interpretations.

Artful geographic teaching will build proper attitudes.

VI. The Geography Master Standards Pattern is designed to fit the growing demands of socialized secondary education, in which geography plays an integrating role.

VII. High school geography curriculum and teaching aids to be co-ordinated with the geography master standards program.

VIII. The successful attainment of higher professional standards in geographic education depends upon co-operation of all concerned.

I. The Expansion of Geography Offerings and Enrollments in Secondary Education Calls for Adequate Teacher Training in Geography

Americans today are becoming increasingly aware of the complex interrelations of human society and the growing interdependence of regions and peoples. In recognition of this fact, high school administrators and educators throughout the country are readjusting their curricular and teacher training programs to fit the new order "to see the relationships," as one state committee has recently expressed it, "between the fields of subject matter, and to understand, interpret, and cope with the contemporary world."

Or stated in the words of another: "We are moving steadily from a program of disassociated subjects based on mental training alone to one of interrelated subjects which will be based upon areas of life's needs." In other words, high school pupils are to be taught to think and act in terms of life adjustments to the social, economic, and political problems of today and tomorrow.

Attention is, therefore, respectfully directed here to the fact that the modern science of human geography is organized to contribute its part to the understanding of society's problems and our adjustments to them. Modern geography focuses its attention on the significance of location. It attempts to show how one place and the people in it differ from other places and other people. Geographers have long been conscious of these differences, and now, as during the First World War, that the general public has become aware of the existence and importance of these differences, geographers and geography are increasingly demanded both in public service and in education.

Because geography deals with places and peoples it attempts to deal with problems and social processes as they are combined in regions. It does not limit itself only to political, economic, or social problems, but it does deal with all these problems as they exist together in areas. It thus serves as a core-unification basis of integrating the subject matter of the various specialized disciplines.

Geography must be treated historically, for to understand the arrangement of people on the land we must go back to origins and trace developments. But as we move from country to country, and from region to region, we find that each area of human settlement possesses distinct individuality—an individuality created by differences in the nature of the people, differences in the nature of the land, and differences in the experience these people have had in their effort to form workable connections with the resources of the land. Geography, conceived in this light, is the core subject of the social studies—the subject which must precede and form the foundation of specialized social studies.

Because of the intrinsic values of geography in interpreting community and world problems, as well as injecting a unifying principle into education generally, educators have shown an increasing interest in enlarging the geography program in the high school and putting such a program on a professional teaching basis.

In order to avoid the prostitution of the high school geographic material in the hands of poorly trained teachers who do not understand its full significance, or proper relation to the total social studies program or to the world scene, it is extremely important that we now take precautionary measures to insure a better supply of geography-trained teachers for secondary schools.

Such an improved supply of improved teachers is predicated upon more training in geography in teacher-preparatory institutions and in the in-service training of teachers, as well as upon more prestige for that specialized training in the secondary school faculty group itself.

It follows, therefore, that every effort should be made at present to increase the geography instruction given prospective teachers in order to insure that prospective teachers of social studies are reasonably well trained to handle the geographic materials which society and the school administration are likely to demand. One way of safeguarding this situation and of making certain that we actually realize on the investment of increased geography instruc-

tion in schools, is a more adequate program of certification for social studies teachers—a program of certification which will insure a reasonable knowledge of geography.

Many statements made in recent years would appear to indicate that apparently both education specialists and geographers have been looking forward to such a program of certification. The National Council of Geography Teachers is offering such a program now for your consideration. At its meeting in Baton Rouge, Louisiana, on December 27, 1940, acting on an appeal that geographers meet their obligations to secondary education, the Council resolved to appoint a committee to investigate the geography high school situation and recommend a geography program in line with other high school teacher training and licensing requirements:

"Whereas, It has been repeatedly called to the attention of the National Council of Geography Teachers that many teachers in the various states are teaching geography with inadequate preparation in geography: Therefore be it

"Resolved, That the National Council of Geography Teachers respectfully urge that the same special academic training be required of teachers of geography as is required of teachers of other academic subjects, and

"Be it further resolved, That a committee be appointed to set up minimum standards for geography teachers and that the report of the committee be submitted to the Executive Committee of the Council for approval."

The committee appointed by Miss Alice Foster, President of the National Council, to carry out the above resolutions, includes both education and geography specialists. Its personnel appears at the head of this official report.

After a year of deliberation on the certification data of the various states, and after an exchange of memoranda among its members dealing with the problem of geography certification, the Standards Committee, through its chairman, submitted its findings and recommendations to the Executive Committee of the National Council, meeting in New York City on December 31, 1941. Upon authorization of that body, this committee now respectfully addresses itself to all such agencies of secondary education which may be interested in our appeal for a philosophically and instructionally sound program of training for secondary school teachers of geography.

To determine how the geography teaching problem and its solution fit into the national educative framework, an inventory was made of the teacher preparation required in each of the forty-eight states. As expected, this revealed, first of all, an extraordinary diversity in academic, professional, and subject-matter requirements, of all subjects in general. For geography, however, the situation shows far more diversity than for most subjects, and it is further complicated by the fact that the exact license status for geography is almost indeterminable in some instances, and at best it is uncertain.

II. General Academic Secondary Certification Criteria Reviewed and Classified as a Basis for Determining Desirable Teacher Training in Geography

In view of this extreme complexity of certification pattern, it seems obvious that any one simple geographic certification plan cannot very well be made to fit all situations. It would seem equally impracticable to propose a distinctive plan for each state. Accordingly, the solution of the problem has been approached from the angle of a two-fold classification of the certification requirements with regard to (1) the degree of generality or specificity of academic and professional requirements, and (2) the teacher-training requirements as based on the social studies with which high school geography is now almost entirely associated.

The "Geography Master Standards Pattern" recommended subsequently is the outgrowth of classifying all the certification types into the following recognized generic types of state certification criteria:

A. Classification Based on General Academic and Professional Standards
   1. States which base high school certification exclusively or essentially upon graduation from an accredited college.
   2. States which, in addition to a college degree, specify a teaching major (or majors) and minor (or minors) requirement with a uniform number of hours for all subjects (no core requirement).
   3. States which in addition to a college degree, specify a variable number of hours for the various teaching major or minor subjects or subject groups (no core requirements).
   4. States which have, in addition to degree and teacher major specifications, general preparatory, basic or core-curriculum requirements.

B. Classification Based on Teacher-Training Requirements in the Social Studies
   1. With respect to the core-curriculum, or basic training, for all teachers, regardless of the subjects they are preparing to teach.
      a. States which include social studies in the basic training program, and enumerate the recognized social studies, *including geography*.

b. States which include social studies in the basic training program with enumeration of subjects, but which *fail to name geography.*
c. States which include social studies in basic training program without enumeration of any specific subjects whatsoever.

2. With respect to the teaching major in social studies.
a. States which enumerate subjects in the social science teaching major, *including geography, with a specific number of hours in geography.*
b. States which enumerate subjects in the social studies teaching major, *including geography,* but which permit alternative electives, or otherwise do not specify number of hours.
c. States which enumerate subjects in a social studies teaching major, but *omit geography* from the list.
d. States which do not enumerate any subjects in the social studies teaching major.

III. The Proposed "Geography Master Standards Pattern" as a Suggestive National Guide to Desirable Secondary Teacher Training Requirements in Geography

To give a synoptic expression of what the National Council feels should be the minimum training for teachers of high school geography in any form, and to expedite geographic recommendations to fit practically each of the generic types of state certification as classified above, the following "Geography Master Standards Pattern" has been formulated:

1. All prospective teachers of any high school subject whatever shall be required to take one year (six semester hours) of College Geography, to include at least three hours in "Principles of Geography." We urge this basic education requirement in all states, particularly those which have already adopted the basic or core-curriculum preparatory requirement of all teachers, as found in Class B 1 above.
2. In all cases where "a general teaching major" is made the basis for teacher certification, the state law shall be construed to mean this requirement shall be applied to the teaching of geography in any form the same as to any other field, as history, economics, etc.
3. Where hours for "teaching majors" are varied, the number of hours of required geography should be the same as for history, with which subject geography has been traditionally associated from the days of Herodotus on down to the present, as a general background cultural subject.
4. Teachers of social science should be required to take the following subjects:
a. The general introductory course in the Principles of College Geography .....
.....3-6 sem. hrs.
b. A regional course in Continental, Historical, or Political Geography...3 sem. hrs.
c. A course in Economic and Commercial, or Conservational Geography..3 sem. hrs.
5. Teachers of Commerce who are going to teach economic or other geography courses should have the same training in geography as teachers of the social studies. (See section 4.)

Application of the "Standards" Pattern

As indicated above, the "standards" pattern is intended to be flexibly adaptable to the various state certification conditions.

Several type examples may thus be considered, in one or several of which categories any particular state may find itself:

Using as a Basis Certification Classification "A"—General Academic—Professional

Class A 1: States which base high school certification exclusively or essentially upon graduation from an accredited college. Though such states may not specify teaching majors, the various regional accrediting associations as a rule expect a teacher in such states to have at least 13 to 15 semester hours training in the subjects taught. Our recommendation: Number 2 of the "standards" pattern will apply here.

Class A 2: Uniform number of hours in teaching majors and minors. Recommendation Number 2.

Class A 3: Variable number of hours in teaching majors and minors. Recommendation Number 3.

Class A 4: With core-curriculum requirements added. Recommendation Number 1.

Using as a Basis Certification Classification "B"—Social Studies

1. With Respect to Core-Curriculum

Class B 1 a: Geography included in social studies core-curriculum. Recommendation: At least requirements as set forth in No. 1 of the "standards" pattern; preferably No. 4.

Class B 1 b: No geography now being included. Since geography presents basic materials which touch and ramify into other social studies, it is presumed that its omission from the list of social science core subjects by certain states is largely a matter of oversight. The Council urgently recommends that geography be given specific recognition and apply the same teacher preparation requirements as for class B 1 a.

Class B 1 c: Core-training in social studies without any enumeration of specific subjects whatsoever. Recommendation same as for preceding.

2. With Respect to the Teaching Major in Social Studies

Class B 2 a: Social science subjects enumerated, including geography, with specified number of hours in geography. The Committee considers this the ideal arrangement, since this expression of geographic consciousness guarantees at least a minimum exposure to geographic teacher training. The Committee would urge

all states to adopt this certification plan and apply recommendation No. 4 for teacher preparation.

Class B 2 b: Varying from the preceding in allowing electives or otherwise not specifying the number of hours in the several social studies. It is urged that subject matter be enumerated so that geography may not be omitted from the social science teacher training program. Recommendation as for Class B 2 a.

Class B 2 c: States which enumerate several social science subjects but do not at present include geography. This seems wholly unjustified. For many reasons, as will be brought out later in this report, the Committee feels that geographic training is as essential to the social studies program as is any other discipline, and should be specifically recognized. The training recommended is No. 4.

Class B 2 d: States which do not enumerate any subject training in the social studies major. The Committee views this arrangement with decided disfavor, whereby social studies may become merely in name a substitute for history, as has occurred in some states. Recommend training No. 4.

IV. The Special Case of Geographic Education Under a "Commerce" License

In a number of states prospective teachers of business, economic, or other commercial subjects are certified not in a separate category from the social studies but under what may be called a Commerce or Business License. Economic or Commercial Geography frequently becomes a part of the teaching schedule of such a licensed teacher who may have had little or no professional training in geography per se. The assumption in such cases seems to be that no such special training is necessary, although conversely, a geography major teacher might not be presumed to be qualified to teach economics or business law or accounting, without having studied those subjects.

Though it is recognized that the subjects of geography and economics are closely related, in about the same way as geography and history, nevertheless, Economic Geography is not economics but geography, and calls for a distinctively geographical approach, philosophically and pedagogically speaking. The mere presentation of agricultural and industrial products of the various political units of the world without relating them significantly to the geographic basis of their production and consumption, or to the economic or political problem which grow out of the diverse regional

distribution of such products, falls as far short of professional teaching standards of geography as would the presentation of uninterpreted statistics or other empirical data in economics.

The fact that in many states, Economic Geography is at present the main offering in geography, makes it all the more imperative that commercial teachers of the subject have special training in geography. For this reason the Committee urgently recommends that section No. 5 of the Geography Master Standards Pattern be seriously considered in the certification of commerce teachers.

V. THE GEOGRAPHY MASTER STANDARDS PATTERN IS FORMULATED AND SUPPORTED ON THE THREE THESES THAT:

A. SUCCESSFUL TEACHING OF GEOGRAPHY PRESUPPOSES A COMPREHENSION OF ITS PHILOSOPHY AND IDEOLOGIES.

B. SUCCESSFUL TEACHING OF GEOGRAPHY CALLS FOR A KNOWLEDGE OF ITS SCIENTIFIC PRINCIPLES.

C. FINALLY, SUCCESSFUL TEACHING OF GEOGRAPHY DEPENDS UPON ADEQUATE TRAINING IN THE ART OF THINKING AND TEACHING "GEOGRAPHICALLY."

Successful attainment of the express and implied objectives in high school geographic education on the part of instructor and student will depend, largely, first of all, upon a correct conception of what modern geography is and aims to do in citizenship training. It depends furthermore upon a sympathetic and cooperative attitude of educators towards putting geographic standards of training and certification on the same general level as that of other professionally taught high school subjects.

Geography as a Philosophy

1. The basic principle which underlies all professionalized geographic instruction is that places and people differ, and that these differences demand careful description and even more careful attempts at interpretation. One of the basic facts with which geography deals is the distribution of people on the earth.

Any attempt to explain the very irregular distribution of people on the earth or their relative prosperity brings us face to face with the problem of habitability or productivity of land. How many people can be supported in a given territory? An attempt to give an answer to this question calls for an adequate survey of both human resources and land resources, and a correct interpretation

of the relations between the two sets of factors. The population capacity of regions cannot be measured simply in terms of the natural features, such as climate, relief, soils, etc., for these are inherently passive. It is recognized that these features do at times present limitations to settlement or to one or another form of human occupance. But the inhabitability and progress of regions, in the last analysis, must be evaluated in terms of their human cultures.

Thus modern geography approaches the problem of the habitability of areas in terms of sequent occupance studies which observe the interrelations existing between the qualities of the people and the qualities of the land.

Geographers, along with other teachers of social studies, have fallen into the error of trying to follow too closely the pattern set by the natural sciences. Partly with the objective of making their discipline seem "scientific," they have insisted on the formulation of principles, or simple generalizations. Yet actually all the studies dealing with man cannot be treated in the same manner as those dealing with physical phenomena. No simple explanation can be found to provide a key to an understanding of the facts of population distribution, and the habitability of land. The explanation of any specific region is likely to be made up of the complex interplay of many factors, some of which defy exact measurement or even reasonably accurate description. In this respect problems in the social studies differ from those in the natural sciences, for in the latter the simplest explanations are regarded as the most plausible, whereas in the former the simple explanations may almost always be regarded with suspicion. Geography should attempt first to provide accurate description; and it should not fall into the error of trying to be "scientific" with data which cannot be reduced to measured quantities.

But geography should not be merely descriptive in the sense that it is limited to the present. In order to approach an understanding of how these differences of population or habitability have come about, it must go back to origins and trace man's experience with the land. The present must be shown as an outgrowth of the past; and the present may, with due caution, be extended into the future.

Geography never fails to study a human society as a part of the whole complex of a region. A society cannot be understood without reference to the land in which it is rooted. Man does not exist

in a vacuum. He has reciprocal relations with the physical earth, from which, in the last analysis, he derives his existence. Nor is his relation to his physical environment a mere morphological one, as "coins in a box," in the words of the educator John Dewey, but rather like that of a "plant in the sunshine and soil."

Inadequately trained teachers may take this to mean that man's behavior in the environment is considered by geographers to be merely a passive one. That would be quite incorrect. Man may be considered instead as the active and deciding agent in the complex environmental equation. Yet man conquers or controls nature only in so far as he learns to obey its laws.

Thus one of the first philosophical principles which a teacher of geography must grasp is that all elements of a landscape exist side by side with man in a reciprocal functional fashion, and that the outstanding contribution that geography has to make is to show how man can make the most of his life by living in harmony with his environs.

2. Geography has other idealogies. Practically every course in geography is a contribution to the cause of conservation. And a geographer is an all-round conservationist. This is only natural in view of his environment- and ecology-consciousness. If adjustment to one's environment is a primary key to the geographer's philosophy of life, then the geography teacher fully trained under the Geography Master Standards Pattern will be among the first to detect man-made maladjustments resulting from waste or unwise use of our natural resources. Recommendation 4 c of the Geography Master Standards Pattern specifically suggests conservation training.

3. A geographer is ecumenical in his appraisal of the problems of the human race. Being trained to recognize the interrelations of the several factors in any one environment, as indicated above, he is also conscious of the interdependence of the people of one region with that of another. Economic and commercial geography (4 c of the Geography Master Standards Pattern) will supply such training.

Geography as a Science

As "time relationships" constitute the basic principle of historical interpretations of events, so locational, spacial, areal, or regional relationships form the key principle of the geographer's contribution to the understanding of world events. Thus the science

of chorography is to the geographer what the science of chronology is to the historian. Both sciences seem necessary for understanding world phenomena. Strip events either of time or space concepts, and there is no reality—only intellectual chaos.

If the common cooperative goal of the historian and geographer is the interpretation of human events, the historian emphasizing "time relationships," the geographer "space relationships," then it would seem both advisable and practicable to adopt the Committee's suggestion of including a course in Historical Geography in the geography teacher-training program, as outlined in 4 b of the Geography Master Standards Pattern.

Perhaps at no point is the science of geography so little understood or as much misunderstood as in this—that the concept of the locational factor implies more than the spotting of a place on a map—the old "sailor type" of geography. It is not difficult to understand, therefore, the mediocrity of much of what goes under the name of geography in the high school or of what is supposed to be geographic education sandwiched in with much of the social science program.

A map in itself is not geography. A memorization of mere "points" on a map or of a batch of geographic statistics of population, production, etc., does not constitute true geographic understanding any more than the memorization of mere dates or names of historic characters constitutes historic interpretation or criticism.

But the map is a device which is fundamental to geographic method. Because of the impossibility of viewing the whole or any large part of the curved surface of the earth it is necessary to reduce that surface to a plane of a size which can be observed. Other disciplines make use of maps, and the construction of the basic surveys on which maps are laid out is the special duty of engineers. But the techniques of using maps, of plotting data on maps, of comparing one map with another—these are the special techniques developed by the science of geography. Only by learning how to read and interpret maps can the student of geography become the master of his subject. Only by the use of maps in the classroom can students become conscious of the relation between things on the surface of the earth. The map translated into the reality of the earth's surface, develops in the student the consciousness of things which lie beyond his horizon, develops, in other words, his "bump of location." Geographical teaching must be built around the map.

Geography as an Art

Geography in the sense of human ecology, or "ecesis," as expounded above, is one of the most difficult of all subjects to teach successfully. It assumes first of all a reasonable conversancy with both the physical and social sciences. But geography is not a synopsis of these fields. Even a most thorough familiarity with the course content of all of them, if that were possible, would not guarantee effective high school geography teaching. Anyway, it is the business of the separate disciplines to supply such information in their more professionalized manner, with which geography has no business to compete.

The distinct province of the geographer is to learn how to use such facts of his fellow natural and social scientist as will aid him in building up "regional" and "relationship" concepts which show the significance of the location factor.

"Thinking geographically" is an art based on a clear concept of the relation between the position of things on the face of the earth. It recognizes the existence together in the same area of a complex of elements. It seeks to answer such questions as "What has one thing to do with another?" in explaining, for example, "Why people live in one place rather than another," "Why certain occupations seem to be favored over others," "Why we find a distinctive type of agricultural or manufactural pattern," "How are political ideas with respect to local, national, or international problems influenced by the resources of the natural environment, or by the type of settlement and occupational conditions?"

Since the distinctive contribution of the geographer to citizenship education then is to determine the regional aspect which underlies our societal as well as political problems, the high school teacher of geography or of the social studies must be technically trained:

1. To inventory and classify regional characteristics and to draw regional boundaries based on other than purely political considerations. A knowledge of all the exact lines of all the political frontiers in the world does not in itself guarantee one a bit of understanding of a "geographic region," the basic concept of modern scientific geography.
2. To recognize that a non-political geographic human-use region is an entity much like an organism, in which the functioning of the several parts and the relations of one part to another are governed by their relation to the whole. Thus each man-made product added to the landscape is recognized as having an organic connection with each form of the natural and of the ethnographic landscape in such a way that there is a continuity of form and function throughout the whole.

Change any part of either the natural or ethnographic environment and you have a different history of the area resulting. While different individuals will likely react differently to the same environment, the same individual will likely react differently in different environments. Thus the connection between psychology and geography.

Map Training the Key to Successful Geographic Regional Analysis and Interpretations

It has been said that the German political organization recognizes no geo-political theory ("geo-politik") worthwhile considering which is not expressible in map form. Mappable ideas are specific and committal. They may be wrong or right, poor or good, but the map shows a perspective of facts or ideas which distribution pattern presents a clearer picture of regional relations than any other known device in visual education, yes, than probably all other visual aids put together. "Here are the facts regionally organized on perhaps several different maps. Now, what 'a priori' generalizations or conclusions are you going to draw from them in the way of correlations seeking to answer such questions as proposed in the preceding section above?"

Thus the geographic technique by which regional relationship thinking and teaching is effectuated is largely by map construction and map dissection. If the "region" is the geographer's province of exploration, then the map logically becomes the chief geographer's tool. Whether or not a geography teacher has a clear conception of what geography really is and how it would be taught can therefore usually be determined by the "number" of maps which are used, the discrimination of "kinds" of maps to bring out particular facts and correlations, and the skill with which the personality factors of the region (indicated on the maps) are dynamically impressed upon the student's mind as presenting a real problem situation close to his life's interest and welfare.

A trained teacher will also recognize the different values and purposes of map projections. For example, it will be recognized that the chief educational value of using the familiar Mercator map of the world, aside from its nautical advantages, will be to show what kind of map should *not* be used to show areal relationships. But in spite of its grotesque and fanciful exaggeration of size and misshapen outlines of such regions as Alaska, Canada, Greenland, Scandinavia, Siberia, and even of the world powers and other countries of the middle latitudes, the Mercator map seems to have

priority in featuring the news of the day, whether in the newspapers or in the classroom.

Yes, by all means, let us follow the advice of our government officials and news commentators to get out our globes and maps, for that is really the ideal way to follow the news of the day. An event unrelated to any environment does not make much sense.

But if we want to make our students see the actual "strategy" of petroleum, of steel-making minerals, of rubber, of certain types of natural land defenses, of vulnerable coastlines, of position and shape of countries, and a host of other things which are basically related to war-creating, war-waging, and ultimate peace-proposal programs, then the globe, otherwise the only true map of the world, is far from adequate. It does not portray all the things of the environment we have to know to see that environment in action.

And as for the map, or rather maps, the teacher trained according to the Geography Master Standards Pattern will point out how to interpret the news of the day cartographically by the right kind and use of maps. Specialized training in map-making and map-reading is available in courses in cartography.

It is taken for granted that the prospective teacher of high school geography and of the social studies will see the professional value of supplementing subject matter training with a course in the "Teaching of Secondary Geography."

Artful Geographic Teaching Will Build Proper Attitudes

It is obvious that good teaching in geography, as in other fields, depends upon the inspirational and moral as well as the educative side. Once the significant character analysis of a community, of a region, or of a country, has been made, the way is open to the well trained geography teacher to inculcate proper attitudes of citizenship towards our natural heritages.

VI. The Geography Master Standards Pattern Is Designed to Fit the Growing Demands of Socialized Secondary Education, in Which Geography Must Necessarily Play an Integrating Role

Wherever high school geography has been given a professional chance at all, it seems to have made rapid progress. One state, for example, has shown an increase as high as 356% in social geography enrollment, for a five-year period, 1929-1934. Though exact re-

cent statistics of the number of high schools offering geography are generally lacking, our survey reveals that in five of the states percentages (some estimated) range from 71 to 90; in six, from 41 to 70; in four, from 26 to 40.

How is this recent growth to be accounted for? There are doubtless many contributing factors. Undoubtedly the socialization of its subject matter and the recent tendency toward curricular association with the social sciences in the colleges and in the high schools are the chief general contributing factors. Modern geography is definitely anthropocentric in its collaboration side by side with anthropology, economics, history, political science, sociology, and psychology in the consideration of human institutions and human problems.

That geography is considered by a preponderatingly large majority of high school people as a social studies subject is borne out by the following statistics based on returns from 29 representative state departments of education:

84% of the states classify geography as a social science;

10% of the states classify geography as a commercial subject;

6% of the states classify geography as a natural science.

Those universities which confer the greater number of doctor's degrees in geography have also affiliated the subject with the social sciences, in whole or in part.

Other lines of evidence may be mentioned:

1. The strong anthropocentric theme of nearly all modern geography textbooks and reference works, both of the college and high school level.

2. The phenomenally increasing recognition of geography in the works of the allied social sciences, as exemplified in most of the new history, sociology, and economics texts; also in reference works, such as *American Regionalism* by Odum and Moore, and the *Encyclopaedia of the Social Sciences.*

3. The invitation recently extended by the National Council of the Social Studies to Dr. Preston E. James, Professor of Geography at the University of Michigan, to become a member of their committee which is considering the part that geography should play in the high school social science program.

4. The rapidly expanding membership of geographers in the national social science honor society, the Pi Gamma Mu. The chairman of the Standards Committee recently made a survey of this

organization, of which he happens to be a member, and found that out of 27 institutions having a department of geography, 18 of them have geography faculty representation in the society, and an even greater percentage of chapters recognize geography as a part of their social science organization.

In view of these close associations of geography with the social sciences, both in subject matter and organization, the Geography Master Standards Pattern offers specific suggestions as to course selections for the social science licensed teacher (See recommendation No. 4). As there pointed out, beyond the Principles course in geography, special courses should be selected in the fields of regional, economic, conservational, historical, and political geography. With scores of institutions now offering a wide range of geography courses (several as many as 30 to 40) the prospective or in-service teacher of geography or of the social studies should not find it difficult to satisfy his particular interests.

High School Geography Curriculum and Teaching Aids to be Coordinated with the Geography Master Standards Program

The Standards Committee recognizes that adequate high school curricular construction in geography must go hand in hand with the proposed plan of professionalized teacher-training in geography. Highly valuable contributions have already been made along this line as in the Thirty-second Yearbook of the National Society for the Study of Education, in separate published works by individuals and the National Council, and currently in numerous articles appearing in the JOURNAL OF GEOGRAPHY, the official organ of the National Council of Geography Teachers (Published by A. J. Nystrom and Company, 3333 Elston Avenue, Chicago, Illinois).

The presently proposed standards plan, however, would seem to profit greatly, if it were implemented by, and synchronized with, a comprehensively organized four-year program of high school geographic offerings to meet the present-day accelerated demands of geographic understanding of world problems. The National Council Executive Committee has accordingly approved the additional recommendation of the Standards Committee that a curriculum committee be appointed to provide such high school geography curricular program and pedagogical aids as seem expedient to conform to the most recent trends in education theory and practice.

VIII. The Successful Attainment of High Professional Standards in Geographic Education Depends upon Cooperation of All Concerned

The National Council of Geography Teachers, organized to increase the effectiveness of geography teaching in America, is grateful for the cooperation it has received from time to time from educators and various academic groups interested in secondary geographic education.

The High School Geography Standards Committee feels deeply indebted to all those, who by correspondence and otherwise have contributed data and counsel which have made it possible for the Committee to function.

It is realized that the successful projection of any teacher training program rests upon both an educative and legislative basis.

It is hoped that the Geography Master Standards Pattern herein proposed may contribute towards the solution of our secondary geographic education problems.

Each member of the Standards Committee would warmly welcome criticism of and comments on the program here set up, as would be helpful in building a sound professional base for secondary geographic education and teacher training.

February, 1943

ILLUSTRATIVE MATERIAL FOR CONSERVATION EDUCATION. IV. OBJECTS, SPECIMENS, MODELS

W. H. HARTLEY
State College for Teachers
Towson, Maryland

One of the best ways to familiarize pupils with the nature or their environment and its resources is to take them out of the classroom to examine certain aspects of nature. This is not always convenient or possible. It is possible in many instances to bring samples of nature's gifts into the classroom. It is even possible, thru the use of models, to have cross sections of the terrain where they may be examined at close hand. Science teachers have long made use of this method and much of the material they have had prepared may be utilized by social science teachers.

An excellent source of objective material is the local or state museum. The educational departments of many museums now have regular lending services to the schools, and teachers may obtain much material to vitalize their instruction. A list of sources of this type of material will be found below.

Many schools are acquiring objects, specimens and models as a part of their collection of permanent teaching material. Out of such efforts have grown school and classroom museums. These small museums will be increasingly effective as those responsible for them keep their material well labeled, stored and indexed. To assist schools in building up such collections, and in obtaining loan materials to augment their own collections, the following source list should prove useful.

American Museum of Natural History, Central Park West at 79th St., New York, N.Y. The sample cases listed below are available to schools, colleges and other responsible groups at the rates noted. The rental fee entitles the borrower to the use of the material for one week including the time required for transportation to and from the museum. The borrower is expected to pay transportation costs both ways in addition to the regular rental fee. The average case weighs about 20 pounds.

No. C-8 *Oil.* By a series of drawings and samples this case shows the origin, source, and steps in the refining of crude oil. Rental $1.00.

No. C-9 *Paper.* Case showing the process of manufacture of paper from wood pulp. Rental $1.00.

No. C-10 *Rayon.* Shows the process of manufacture of rayon. Rental $1.00.

No. H-24 *Birds That Are Our Friends.* Includes stuffed screech-owl, cuckoo, goldfinch, and bob-white. Rental $1.50.

No. C-47 *Minerals and Rocks.* Contains 15 specimens of common rocks and ores. Rental $1.00.

No. C-48 *Minerals*. Contains 25 specimens of common ores and precious metals. Rental $1.00.

No. C-49 *How Rocks Form*. Shows relation of sedimentary rocks to their metamorphic equivalents. Rental $1.00.

General Biological Supply House, 761-763 East 69th Place, Chicago, Ill.

25 4 722 *Sets of Hardwoods and Softwoods*. Labeled specimens of all the principal lumber woods found in the United States. 48 specimens, each piece 2¼ x 5 x ½ inches. Price $5.95.

340 D 972 *Rocks and Minerals*. 16 specimens, $2.50.

340 D 97 *Rocks and Minerals*. 20 rocks and 20 minerals. $6.00.

340 D 974 *Rocks and Minerals*. 30 labeled specimens. $1.00.

Museum Extension Project, Works Progress Administration, 69-71 Belmont Ave., Newark, N.J.

Models. Authentic plaster cast and wooden models. Shipping costs are paid by purchaser.

M-1 *American Farm*, 18 x 24 x 2 inches, 6¼ pounds, sale price $2.50.

M-2 *Lumber Camp*, 18 x 24 x 6 inches, 14¾ pounds, sale price $3.00.

M-39 *American Farm*. Folding model, sale price $7.00.

M-40 *American Farm*, detailed, sale price $5.00.

National Lumber Manufacturers Association, 1337 Connecticut Ave. N.W., Washington, D.C.

Wood Samples. Set of 48 specimens, labeled, sale price $1.95 per set.

Romeyn B. Hough Co., Lowville, N.Y.

Wood Samples. Set of 72 species (216 specimens) of wood of the northern states, $5.00. Also set of 68 species (204 specimens) of wood of the Pacific slope, $5.00.

Teaching Material Service, 205 East 42nd St., New York, N.Y.

Paper and Pulp. Chart 38 x 25 inches showing paper making process. Outline map of the United States forest areas. Sample of pulp solution. Price 50 cents.

Petroleum. Chart 38 x 25 inches with pictures of petroleum industry. Sample of crude oil. Price 50 cents.

Ward's Natural Science Establishments, Inc., P.O. Box 24, Beechwood Station, Rochester, N.Y.

Collections of Minerals and Rocks

MC-3 *Student Collection of Minerals*, 36 examples, $4.50.

MC-4 *Beginners Mineral and Rock Collection*. Set of 25 minerals and rocks, price $1.25.

MC-5 *Beginners Mineral and Rock Collection*. Set of 70 specimens in strong bag, price $2.75.

Physiographic Models

PD-1 *Young Valley*. Price $5.00.

PD-2 *Old Valley*. Price $5.00.

PE-1 *Young Rock and Drift Coast*. Price $5.00.

STATE DEPARTMENTS AND AGENCIES

The following agencies distribute exhibits and realia within limited areas.

Delaware State Board of Fish and Game Commissioners, Dover, Del.

Florida Forest and Park Service, Tallahassee, Fla.

Iowa State Conservation Commission, Des Moines, Iowa.

Michigan Department of Conservation, Educational Division, Lansing, Mich.

Mississippi State Game and Fish Commission, Jackson, Miss.

New York State Conservation Department, Arcade Building, Albany, N.Y.

West Virginia Conservation Commission, Charleston, W.Va.

MUSEUMS (Serve limited areas)

Archeological Society of Southern California, P.O. Box 482, Pasadena, Calif.
Buffalo Museum of Science, Humboldt Park, Buffalo, N.Y.
Franklin Institute of Pennsylvania, Philadelphia, Pa.
Maryland Academy of Sciences, 2724 N. Charles St., Baltimore, Md.
Museum of Northern Arizona, Fort Valley Road, Flagstaff, Ariz.
New Jersey State Museum, Trenton, N.J.
North Carolina State Museum, Raleigh, N.C.
Philadelphia Commercial Museum, 25th and the Parkway, Philadelphia, Pa.
San Diego Museum, San Diego, Calif.
Taylor Museum, 30 W. Dale, Colorado Springs, Colo.
Valentine Museum, 1015 E. Clay St., Richmond, Va.
Washington State Museum, University of Washington, Seattle, Wash.
Witte Museum, San Antonio, Tex.

PRACTICAL GEOGRAPHY IN THE HIGH SCHOOL*

TREVOR LLOYD
Dartmouth College

Geographers have, from the earliest times been very practical people. They have always been "doers" and usually have been adventurers. Yet it is a rare geography classroom that gives even a pale reflection of this pioneering spirit. My intention is to outline some of the reasons why I believe that our work in schools would be more attractive and more effective if it were to be more practical.

Much school work, and this applies to many departments of it, is a failure because of the roots from which our educational system has sprung. The academic approach to learning—the way of the book, the eye and the ear—is an inheritance from the days of Monastery schools. They were intended to produce clerks, clergymen and bookkeepers. Practical people did not go to school, they were apprenticed. They learned by doing. The old bookish ways were doubtless suitable for the things needing to be learned in schools. Yet in the past fifty years new bodies of knowledge have become important. Only with the greatest difficulty have the schools been able to modify their methods to take in the sciences and the laboratories without which they are meaningless. Geography has been less successful. It has managed to fight its way into some schools, but often at the cost of becoming an academic study. It has been

* Presented at the New York meeting of the National Council of Geography Teachers, December, 1941.

transformed from the study of the great outdoors, into a poring over pages, or at most the drawing of often rather meaningless maps. Students incline to classify it with history and grammar or latin subjects which are all too easily taught in a dry-as-dust manner. This is particularly unfortunate, not only for the prestige of geography but for the students themselves, because to very many of them the way of the book and the eye is a hard way of learning. Many learn more readily and understand more fully if the hand and the eye are trained in cooperation with the intellectual faculties.

Fortunately geography is particularly fitted for being handled practically in the schools. Like the sciences it is best approached by means of things that can be done. While the school sciences are tied rather tightly to the laboratory for their practical work, the geographer has no such limitations. Anywhere within range of the students serves as a laboratory. Good work cannot be done without the expenditure of a good deal of shoe leather, especially in these days of rationed gasoline. So the geography teacher is greatly aided by two methods. The classes must be taken out of doors where physical, economic and social facts can be studied on the spot; and there must be laboratory study taking as important a place as it does in chemistry, physics or biology. These methods force the teacher to keep his feet on the ground and to do without the billowing clouds of talk and chalk that accompany so much of our teaching. Continual reference to things which the students *know* to be true is one of the few ways by which geography may be kept *real* thruout the school course. While most of the outdoor work will have to be done in the short periods usually devoted to the subject, it is often possible to arrange for half-day excursions and occasionally for longer ones. Much of the actual work must and should be done out of doors, or to use the modern term "on location," but there is a great deal which can be carried on in the laboratory or workroom by the students. Such work is not to be regarded as a decorative trimming to be added as needed to a normally academic course. It is part and parcel of it. The atmosphere of the geography laboratory is less that of a classroom than a workshop. This kind of work, if it is to be any good, needs a great deal of space for the students to move about in and space in which to exhibit or store the variety of equipment that a teacher of geography gathers around himself. In many schools the struggle for "Lebensraum" is almost as acute as in central Europe. We on this

continent have been far behind our colleagues in Great Britain in asking for and securing properly equipped Geography Rooms. Our own organization might consider the value of urging the need for such rooms on the various educational authorities. Once a special room has been secured, the desks torn out of it, its neat and scoured appearance marred by maps, diagrams, charts and apparatus few need to be convinced that what goes on in there is worth doing.

Apart from the need for equipment and space the geography teacher needs time. Practical methods of instruction are always slower than lecture and book methods, but they are also of more permanent use. Where lack of time forces a compromise, essential parts of the work should be handled practically and those less essential in a more superficial way. For this and other reasons, it is impossible to lay down a uniform policy to be followed. In selecting the work to be done local conditions must be borne in mind. Rural schools and urban schools naturally emphasize different work.

Furthermore a great deal depends on the thoroness with which geography has been taught in the lower grades. It is essential I believe not to assume knowledge of the elementary work simply because a student is in a senior high school. Nothing is to be gained by attempting to carry on advanced studies until students have a knowledge of the principles of climate, relief, vegetation and so on. The aspects of geography which are to be treated practically will also vary with the experience and knowledge of the teacher. What follows is a summary of the type of work which has been done at various times and in various places by the writer.

1. Map-making, map reading, both of local areas and of distant places leading to the use of atlas and other maps.

2. Mathematical geography which may include rough determinations of latitude and longitude, time zones, use of model instruments, measurement of distances by degrees and miles on the globe, and in some cases projections, elements of air navigation and "great circle" routes.

3. Recording of the local weather for long periods, making as complete a record as possible, and keeping the data in the form of graphs. Use of these data to learn the meaning of such terms as monthly mean, annual range. To understand climates of other world regions by comparison with local data.

4. Study of land surfaces from local examples out of doors and from miniature examples or the playground. Making and use of models of the local area.

5. Comprehensive study of the local region. This combines in one undertaking a variety of practical work.

Of these five examples two are chosen to receive more detailed attention here. They are "The making and use of maps" and "The study of the local region."

MAPS

About twenty years ago a committee of the London County Council instructed its teachers that all geography students should "acquire a thoro knowledge of maps, their kinds, uses and manufacture." If teachers of geography had done nothing more than this in the past two decades, and had done it thoroly, today's adults would have good cause to rise up and call them blessed. The proper understanding and use of maps is at the root of all geographical work. Yet there is no part of our work that is less thoroly done. I have for many years tried different methods of inducing students to look not *at* a map but *thru* it to the reality behind. Just as a reader does not see the letters C A T as a group of rather strange lines but as a symbol for a kind of animal, so it should be possible for a pupil to look at a map showing, shall we say, the district in which he lives and see something more than lines, symbols and coloring. I have tried to do it by using aeroplane photographs. The photograph routine is well known. This is how it is done. An oblique air view of a place well known to the class is obtained and each of the students studies it and recognizes places on it, if possible the school or some other local landmark. There is no question in their minds but that the view is genuine and represents what could be seen by anyone in a plane. There is no unreality about it. Then a vertical aeroplane view of the region is secured and compared with the oblique. The students make a map from this view, showing main streets and chief buildings and get the scale by actual determination on the ground of the distance between two points on the view. They then have a generalized map taken directly from the original view. If this is done once or twice it is soon possible for students to recognize the real nature of a map. Variations are possible by using air views of unknown places and then making maps from them. Then a map of the school area that was made before aeroplanes existed and which is demonstrably also accurate is shown. Methods that could have been used in making it are then discussed. The students realize that altho everything is shown in a picture, there has to be a selection in the case of the map. They recognize that the

selecting is done by the map maker. A map should always have a title such as "Map of New York Showing Main Streets." There is no such thing as a map of Manitoba or of New York State. Selection comes in and the greater the area covered the more the selection that has been done and the greater the omissions. As the area to be mapped increases it is impossible to draw objects to scale and symbols have to be invented. The attempt is to make this change so naturally that when the symbol for, for example, a quarry is seen, the student thinks of a quarry and not of a couple of crossed hammers. This work can only be done slowly and if it is not thoro it is a waste of time. It should preferably be done in the lower grades. I have done it successfully in grades six and seven. From their own modest efforts the students realize that making a map of even the home state is a colossal undertaking and can only give a very approximate result and that a map of a country like Canada or the United States is bound to be rather rough and ready and is always open to correction and improvement. They realize, often for the first time, that maps of large areas can only be constructed from the work of countless persons in small areas.

To supplement this work it is useful to give students some practice in making maps without the aid of photographs. This is begun by a map of the room, of the playground or of part of a nearby park. There is room here for teamwork by dividing the job among small groups, the final map being fitted together for exhibition. Accuracy will depend on the methods followed. Simple instruments such as a tape and chain and some form of angle-measurer are the minimum, altho pacing is suitable for longer distances. Students gain accurate impressions of what is meant by "a hundred yards," or "a quarter of a mile," or a height of say "sixty feet." Without such work few of them have an idea of distances so that map reading is largely meaningless to them. The principles of triangulation may be brought in. Many schools have been able to carry out simple levelling and so put in contours on their maps. Without some practical examples contours are exceedingly hard to understand, and the time taken in contouring the corner of a playground is usually worth while. Altho it is encouraging to be able to exhibit a beautifully finished map of a part of the school grounds, there is no need for this. The students learn from the collecting of the data, and the artistry needed to make a good map may well be beyond some of them. Some schools have found that students learn from

making relief models either on a sand table or more permanently, to show the region that has been mapped in scale. If local conditions prevent continuous outdoor work, model making from existing maps is a useful substitute. Their use is increased if the model is small enough to be taken out-of-doors for comparison with the actual region. That is to say it is better to make a model of part of a park which the students can see, than a part of the State which is both too large to see at once and is also out of reach.

THE LOCAL REGION

Practical geography reaches its climax in the study of the local region. Such work converts the student's existing knowledge of his home area into the "geographical language" which he needs to understand what has been written of other places. He is given a yardstick with which to measure the world. It impresses on him the variety of ways in which people make a living within even a small area, and so shows the immense complexity of life in the whole world. From it comes first hand experience of the varied character of the land surface and of the uses to which it may be put. Finally, an intimate knowledge of local conditions shows pupils the types of employment open to them when they leave school. It is a form of vocational guidance.

The limit to what may be done depends on the ability of the students, and on local conditions. The simplest form of the work in a large city is to record on printed maps some type of distribution, it may be drug stores or banks, churches or schools. The aim in this case is less to make a map of permanent value than to give the students experience in recording data on maps. From such simple beginnings more comprehensive local surveys may develop in which the cooperation of other school instructors may be invited. There is ample room here for collaboration between history and geography teachers together with those responsible for art and craft work. Examples of a local survey will serve as an illustration of how the work is done. The area to be covered should be that which is available for direct observation by the pupils. Large scale maps are needed on which to plot results. In western regions provision of local maps is simple because of the use of sections and townships in surveying. The writing of long reports should be discouraged, and anything that cannot be recorded as a map or diagram should be suspect. Committees may be set up to take charge

of portions of the work. For example relief, in the form of maps or models, should be looked after by one group. Others may seek to discover the appearance of the countryside before it was settled by white men. The story of settlement forms another useful piece of committee work, information being secured wherever possible by interviews with old settlers. This leads to a chapter on the present distribution of population. The use of the land next follows. Detailed mapping of the land is possible either by students recording the use near their homes on a large map kept in the school, or by special journeys made with map in hand. A record of the disposal of agricultural produce, what is sent out of the area, when it is shipped, approximately how much and what happens to it is valuable. This can be regarded as analogous to the exports of a country. Then follows naturally a survey of transportation, any routes crossing the area and where they go to. Finally the occupation of persons in any small communities within the region and the ways in which they are dependent on and supply the rural people. The results of such a survey should be in a form which can be easily exhibited and kept for later use. They should be regarded as a sort of Domesday Book of the locality and could be repeated from time to time. Where possible the work of neighboring rural communities can be linked up, particularly in the matter of land-use mapping.

In a city, the work will be of a different nature and there may be more room for the introduction of "civics" and details of government. The place of land utilization is taken by distribution of industries, and maps of population are not possible except of small districts. Newer cities offer scope for correlation with work in history.

Enough has been said to show that there is no lack of practical work to be done. It is important to keep in mind thruout that the object of the work is less to produce a finished job, than to give students personal experience of the sort of things they read of in their geography texts from other parts of the world.

CONCLUSION

Geography as a profession is, and always has been, a practical business. The best geographers have always been doers, travellers and explorers. Practical work removes the subject from among the book studies which are so unpopular in schools. It provides yardsticks by which students may measure information about distant

places that they have to secure from the printed word and from maps. It is the best way of instructing the non-academically-minded students. It supplies an excellent basis for correlation with other subjects, not only with history and civics but with arts, craftwork and so on. The students can see their own work growing under their hands and know something of the pride of the craftsman in work well done. It converts the classroom—a place of desks and blackboards—into a workshop where things happen. Gone is the daily round of reading, listening and writing. Gone is the need for routine, dry-as-dust memorization of matter which is not fully understood. Geography is revealed as a matter of day to day interest, of obvious value and of world wide importance.

GEOGRAPHICAL REGIONALISM OF WORLD PROBLEMS

ALFRED H. MEYER
Valparaiso University

America's total defense participation in the present global war constitutes in itself the most convincing argument for the need of an educational renaissance in the field of high school and college geography.

Events associated therewith reveal at least a two-fold disillusionment in geographic philosophy: 1) That the United States can economically and politically isolate itself from world affairs; 2) That this isolation principle may extend itself even educationally to a point of ignoring those very territorial and other geographic factors and principles out of which grow most of the world problems.

It appears to the writer, therefore, that the lack of a geographic defense in the sense of a geographic knowledge of world affairs has been as much responsible for our belated preparedness program as any other single factor.

This condition seems attributable 1) to the general indifference with which many educators and government officials in the past have viewed the geographic factor in national and international problems, and 2) to the belated development by American geographers of geography courses and curricula specifically organized to meet the needs of the human geographer, the historian, the economist, and the social and political scientist.

High school and even college graduates have little or no space consciousness of world affairs. Since they comprehend neither the space relations of the strategic spots of world events nor the type of environmental conditions under which the events happen (which is really the essence of location), such students live in an ethereal world devoid of areal realities.

It takes a World War to awaken the American press suddenly to the realization that maps can illuminate the events of the day in a more effective way than any other single mode of expressing spatial and environmental relations. Yet, if we don't supply geographic education in the present generation better than we have in the past, it will probably take another World War before the press generally advances to the point of abandoning the almost universal practice of using the navigator's Mercator projection, with its grotesque caricaturization of territorial dimensions, to picture world events.

Much of this mediocrity, complacency, or whatever we want to call it, of geographic spirit, learning, and understanding in America seems traceable to our very departmental doorstep.

If geography is to constitute a meaningful, purposeful, and useful area in civic education, it must be so organized as to fit in with life's everyday activities. Geographic facts and principles must be presented in such a way as to build up a national consciousness of the implications of geographic factors and forces in the problem of the community, of the nation, and of the world.

Geographic offerings will be presented in such a way that the fellow academicians as well as the press and the public will recognize that geography deals with life as well as land, with people as well as places, with philosophical and geo-political ideas, and problems, as well as with maps. Only in this way will the geographer bring to his field and himself the public recognition he deserves for the contributions he is prepared to make to society but which for the most part at the present go unrecognized as geography.

AMERICAN GEOGRAPHIC EDUCATION AS COMPARED WITH THE EUROPEAN

A geographer in Europe is a recognized authority of a highly respected field of learning and public service. In America the geographer is just beginning to make his influence felt in academic and public circles.

That the problems of society in many cases have a definite regional base is a concept which we in America have been slow to

grasp. Scores of contiguous counties may still be found in many sections of the United States, for which not a single topographic map exists upon which to base regional geographic studies.

Aroused by the exigency of national defense, the United States Civilian Defense Council is now experiencing the dire need of community and regional maps to give geographic perspective to their objectives.

One is reminded here of the comprehensive cartographic surveys in England where the entire country-side has been mapped, and this as a joint project in which both the schools and the government participate. Indispensable as it is in building for a sound peace-time land-use economy, such land inventory analysis now constitutes the very foundation upon which England's national defense, especially against air raids, is built.

The extensive geographic fact-finding mapping program and regional land-use adaptation studies by Russia in recent years may well help to explain the basis for the phenomenal resistance and counter offenses offered by the Soviets against the superiorly mechanized German forces. Application of the principle of geographic adaptability, or the law of comparative geographic advantages of regions, has probably been more instrumental in building up the stability of Russian agriculture and industry than any other one thing.

Either because of the feeling that regional planning is incompatible with the democratic way of life, or because of a lack of understanding of its geographic objectives, Americans in many quarters, on the other hand, question the soundness of a regional planning program such as is developed by the National Planning Association.

How a certain type of geographic philosophy can so revolutionize a political science point of view of a state as to threaten the independence of all nations is uniquely illustrated in the "Geopolotik" of Germany, developed particularly by Haushofer, a German geographer. "Geo-polotik" as defined by him is an earth-state concept in which "Raum" (space) and "Lage" (position) form the geocentric basis for Hitler's "Blut und Boden" (blood and soil) campaign to conquer the world.

This instance again illustrates how complacent or short-sighted American officialdom and for that matter American geographers and political scientists have been over against this aggrandizement

propaganda of the Nazis. Unmap-minded Americans seem to find difficulty in following the Fascists' and Nazis' objectives because they have become habituated to think of the totalitarian objectives in psychological rather than in geographical terms. The result has been a feeling of smug security in our democratic way of life.

The philosophy of geographic isolationism has thus found America not only militarily unprepared but geographically unprepared as well. Our boys and girls must be contented for the most part to get their geographic education, what little they get, from non-geographic sources and non-geographically trained teachers. Even many colleges, tho they may have an otherwise comprehensive curriculum, still do not offer a single course in geography taught by a full-fledged geographer.

SOME SUGGESTED SOLUTIONS OF THE GEOGRAPHIC EDUCATION PROBLEM

How can these deficiencies be corrected? How can America be made to realize that practically every epoch-making social, economic, and political problem whether of local, national, or international scope, has its geo-centric implications? Here are a few suggestions:

1. We must obviously introduce regional geography courses in the four-year high school, taught by teachers trained and licensed to teach geography, with the same qualifications as is expected of teachers of other standard disciplines.

The High School Standards Committee of the National Council of Geography Teachers is now about to propose to the high school educator, administrator, and certificating agencies the adoption of certain minimum geography teaching standards.

2. It would seem highly desirable that such colleges as do not now have geography courses, introduce geography courses immediately.

3. Old as well as new departments of geography, it seems to us, should be made, wherever practicable, administratively independent of other disciplines in order that the proper emphasis may be placed on the development of its own subject matter.

4. If geography is to develop mainly along the lines of citizenship training and world problem analysis, as brought out in the theme of this paper, then a social science divisional, rather than a natural science divisional affiliation seems the more logical.

Geography has become a dynamic science of peoples and problems. Indispensable to the geographer as are courses in straight climatology, geomorphology, etc., to the training of a geographer, such courses in themselves do not guarantee geographic thinking in terms of human problems. The most professionally trained physiographer may not qualify at all as a regional geographer, but a proficient geographer will have had training in physiography and other related disciplines.

If it seems inexpedient to classify all geography courses as Social Science, then the next desirable alternative would seem to place such courses as meteorology, climatology, physiography, geomorphology, and cartography in the physical category, and the regular principles and regional geography courses—social, economic, political, conservational, and continental—courses in the Social Science division.

That the Social Science orientation and organization of modern geographic offerings in whole or in part promise to solve our curricular and administrative problems better than any other seems to be testified to by the fact that 85 per cent of our high school administrators and certificating authorities, as found by a survey of 29 representative states, classify geography with the Social Studies.

From the list of universities granting doctors degrees in geography, as reported by Pico,* one is likewise impressed by the fact that those granting by far the larger number of degrees have associated geography either exclusively with the Social Science division or affiliated it jointly with the Social and Natural Science divisions.

5. In addition to the social divisional affiliation, it would seem wise specifically to adapt the courses of our geography curriculum as much as practicable to the development of geo-social, geo-economic, and geo-political concepts so as to unify functionally as well as administratively the work of our department with that of the other social sciences.

Special Course in World Problems

Tho various courses in geography can be so organized as to stimulate an interest in the environmental basis of human prob-

* Rafael Pico. Geography in American Universities. The Journal of Geography, Vol. XL, No. 8, November, 1941.

lems, a special course devoted to World Problems would seem to be a definite asset in every geography curriculum. Such a course may deal with an investigation of current social, economic, and political problems of selected regions or nations in terms of the material and ethnic factors of the environment which are considered essential in understanding such problems. Patterns of population and of land utilization, natural resources, the economic interdependence of nations, and international trade relations, are type topics serving as the geographic basis for discussing current conditions and events.

To get the proper social orientation and motivation for this course material, it is suggested that we:

1) Encourage economics, history, and political and social science majors with some basic geography training to join the geography majors in class forum discussions. 2) Focus attention on current events in the form of individual world problems projects. 3) Organize and orient material as much as possible demographically and cartographically. 4) Critically analyze the genuineness of geographical quality of the project material. 5) Provide a laboratory for original map-making; also a library of periodicals, the maps and illustrations of which may be deleted at will for use by the individual members of the class.

Presentation of individual projects by members of the class in the form of preliminary formal outlines submitted for class criticism, followed by brief essays based upon them, constitutes a creative unit enthusiastically participated in by all members.

One of the chief virtues of the course is that it develops a true geographic point of view of not only world problems but of geography in itself. Elimination of non-geographic material at all times is one of the chief objectives in class criticism.

A technique found helpful in assuring a geo-centric analysis of world problems is to provide a list of all the physical-cultural factors of geography considered essential for regional analysis.

Highly discriminative selectivity in choosing the particular factors most germane and cogent to the particular problem and region in question should be stressed at all times. This selective process leads to a sort of key classification of geography factors and the geographic relationships to be looked for in the survey of world problems. It helps at once to solve the problem of recognizing problems, of seeing thru them, and subsequently rationalizing the

regional problems in those geographical terms which are considered essential to a regional problem synthesis.

Several examples may be submitted to illustrate our point:

1. To many Americans our outpost establishments in "distant" Alaska, particularly in the far-flung Aleutians, have little or no significance commercially or militarily.

A particular map projection—the butterfly conic—showing that southern Alaska lies on the great circle route to Japan and, therefore, on the most direct route, soon disillusions the Mercator-minded individual.

2. To the interior plains isolationist whose only concept of our defense has been based on the age-old conventionalized map pattern of a world represented as two divided halves isolated from each other by sea barriers, the new discovery of the fact that Bismarck, North Dakota, is as near to Tokyo, Japan, as is Los Angeles, California, must come as a distinct shock.

Convincingly simple as it is to observe such proximate territorial relations, why is it that we had to wait until well along in a war before the American people discovered that any place on the globe may be made the center of a hemisphere and that such a hemisphere may show more significant world relations than does either the Western or the Eastern Hemisphere? Truly, globe-mindedness and a bit of the right kind of geographic education before the war might have steered our international diplomacy and our national defense program in such a way as to prevent the piecemeal conquests of the totalitarians.

So much for the physical side of our earth in its influence on the geo-political picture.

3. Geographic regionalism may often clear up confused ideas concerning a social, economic, or political situation, which result from a fallacious line of geographic reasoning or a false geographic premise.

Let us turn to an example of the demographic factor as part of a present day disturbing geo-political situation.

A prominent Moslem contends that Indians should be given immediate and absolute independence. The integrity and security of a national state thus freed, the Moslem does not question. Its preparedness to defend itself is taken for granted.

As everyone knows, the ethnographic composition of India's population is highly diverse. This, for the Moslem spokesman, does

not create a governmental administrative problem any more than in the United States, for, as he points out: Does not also a heterogeneous mixture exist here in the states?

The trouble with this line of reasoning by analogy is that it is statistical instead of geographic. It disregards the all-important fact that, except for the colored section in the South and a few minor foreign racial enclaves elsewhere in the United States, there is no parallelism between the two countries at all in the "pattern" of distribution or "arrangement" of the diverse elements of population. Whereas the United States represents essentially a diffused distribution of its various social elements, India is a mosaic of quite definitely defined geographic units, each region dominated by a particular political, racial, religious, or linguistic group. Thus, India does not constitute a unit at all but is made up of a "regionalized" division of Hindus, Moslems, Jains, Sikhs, Animists, Buddhists, and other groups, each of which would have independence, or even politically aspire to the control of the whole of India. It would be much more accurate to compare the regional ethnographic structure of India to all of Europe than to that of the United States.

The present example illustrates the indispensability of a regionalized analysis of political and other issues. The trouble is that this type of contribution is not generally recognized as geographic, and hence the geographer gets little or no credit for developing the science of geographic regionalism. The term "geographic" seems grammatically redundant here, for is not regionalism of itself a purely geographic concept, the very essence of geography? Its inclusion here then is for added emphasis to make us geographers fully conscious of the need of clarifying for ourselves and especially the American public the field and function of modern geography as based on the phenomenon of regionalism.

Studies of the type illustrated above can be publicized, as was done during the past year by a class in World Problems. A weekly feature entitled "The Chorographer" appeared in the local city press regularly once a week. Each contribution is headed by a challenging question, such as:

1. What resources in the Ural mountain region lead one to believe that Russia might hold out if Moscow falls?

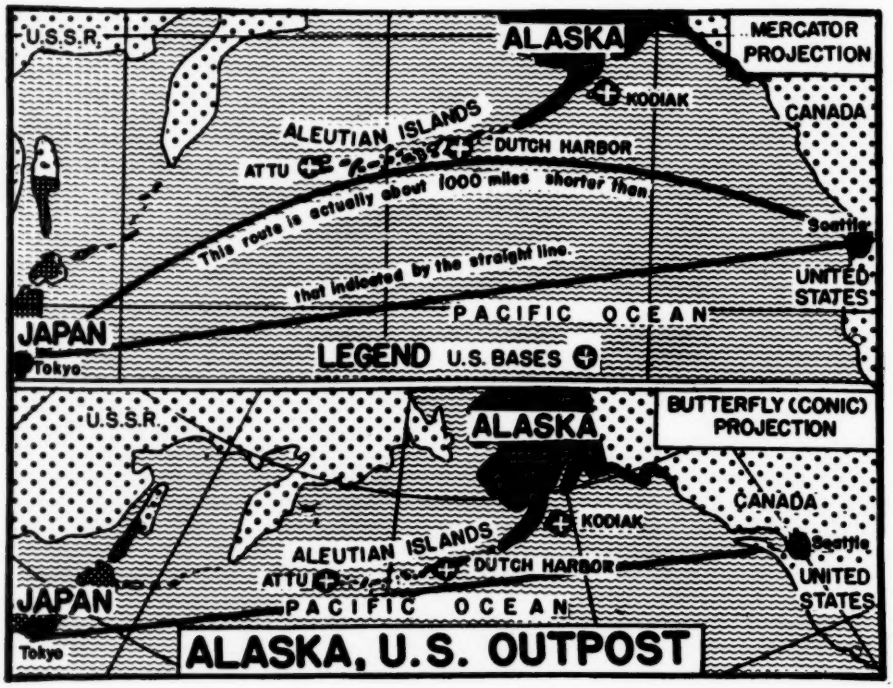
2. What regional conditions make Australia an excellent base for an allied stand and counter attack?

3. Why did Chile hesitate to join the Allies? (A study in shape-regionality.)

4. Why does the United States need to ration rubber? (A study in regional rubber production-consumption relations.)

Each topic was treated strictly geographically and illustrated cartographically. One of the map studies is illustrated here. This press feature received favorable editorial comment.

Publicized studies such as these help to clarify the view that



A close-up view of one of the map studies. It illustrates the importance of selecting the proper map projection to represent the correct relative position of areas to sea routes.

geography is not simply a combination of knowledge and description of the elements of climate, of landforms, of soils, etc., but a field devoted to a systematic integration of geographic facts and principles on a regional basis to elucidate human problems the world over.

If our democratic way of life is to be preserved and made more secure in the future, then our whole educational program needs to be revamped to generate a true geographic perspective of regional and racial relations of all mankind.

CONSERVATION IN PENNSYLVANIA SCHOOLS

NAOMI RUTH VANDERPOOL
Graceton, Pennsylvania

Conservation problems in America, altho comparatively recent, can be traced back to the early settlers' lack of appreciation for nature's gifts. Without thought of future generations our forefathers cleared huge forests and burned valuable trees, ruthlessly destroyed fish and game, depleted soils by overcropping, dismantled pasture lands by allowing their cattle to overgraze, and removed only the most salable minerals, then allowed the mines to collapse or fill with water.

Fortunately, people today are beginning to realize the basic importance of: (1) maintaining the fertility of the soil and controlling erosion, (2) preserving forests, (3) protecting wildlife, both flora and fauna, (4) husbanding the supply of metals and fuels, and (5) using water wisely.

Just what is Pennsylvania doing in conservation? Unfortunately, Pennsylvania had long ignored conservation of its natural resources. However, in 1935, following the lead of the Federal Government, the legislature began to investigate the problems of soil conservation, flood control, and reforestation. These investigations resulted in the passage of a number of laws modelled after the standards set up by the Federal Government.

The Soil Conservation Districts Law of 1937, utilizing the help of the State Soil Conservation Board, provides for soil conservation by means of districts created by land owners. It includes provisions for allocations of funds, agencies of enforcement for land-use regulations, demonstrational experiments to be conducted by the board, and discontinuance of districts if they are found to be impracticable.

An act passed in 1936 provides for a state-wide program of flood control with the cooperation of the Federal Government. It is interesting to note that most of Pennsylvania's conservation problems are due to heavy precipitation. Therefore, by this act districts may be formed to engage in any activity deemed necessary for flood-control projects.

It should be a matter of pride to every Pennsylvanian to know that his state was one of the earliest to promote forestry practice by acquiring state forests, and by carrying on reforestation projects. The Code of 1929 overhauled and modernized the laws de-

signed to reduce forest fire hazards. The Auxiliary Forest Reserve Act of 1913 encouraged the planting and conserving of forests by means of tax reform. Other acts provide for purchase of land suitable for the growing of seedlings, the purchase of land sold for taxes, the sale of seedlings at a low price to persons desiring to plant them, the creation of state parks, and other means of conserving forests. Due to these wise practices in forestry, today about forty-five per cent of the total area of the state is woodland; of this total—thirteen million acres, only twenty thousand are virgin timber.

The laws regarding wildlife and its protection, revised by the Code of 1929, appear to be fairly effective. Because of the four hundred per cent increase in hunting and fishing licenses, game lands will have to be managed still more effectively. Many areas in Pennsylvania are so lacking in suitable habitats that a long time will be required to build them again to the place where game and wildlife will be able to thrive. The cooperation of small groups by building shelters and temporary retreats needs to be encouraged.

This all indicates that the Pennsylvania legislature is by no means backward in the passage of conservation laws; nonetheless, it has not yet taken the important step of requiring that conservation be taught in the schools. This does not mean, however, that the schools and colleges are doing nothing to develop an appreciation for the need of conservation. Quite the contrary.

Questionnaires concerning the teaching of geography were sent to all the elementary schools of Pennsylvania. Over a third of the schools replying, it was revealed, have separate units on conservation; many of the others integrate them with other work, especially with science courses. Altho the eighth grade leads in the number of units, grades six and seven follow closely; indeed many are even found in the fourth and fifth grades. The soil is naturally the chief topic of discussion since its conservation is vital for life itself. The importance of forests, minerals and wildlife is constantly emphasized.

Further questionnaires were sent to various high schools. Few high schools, according to the replies, offer a course on conservation. However, units on the subject are given in the science curriculum and in the twelfth-grade Problems of Democracy classes.

A radio broadcast recently said that "no state teachers college in Pennsylvania offers a course on conservation." To check on this statement, Dr. Norah E. Zink, teacher of conservation at the State

Teachers College, Indiana, Pennsylvania, sent questionnaires to the heads of the geography departments of the colleges. The results prove that the radio comment was erroneous, for twelve out of Pennsylvania's fourteen teachers colleges have a course on conservation in the geography department; three of them teach it in both the geography and science departments. Of the two colleges not offering a full course, one offers a unit in the Principles of Geography classes; the other tries to integrate the material with other courses insofar as is possible. A number of replies furthermore indicate that conservation is brought into most of the geography courses whether or not it is taught separately. Pennsylvania is indeed becoming conscious of the need for conservation; schools and teachers colleges are gradually beginning to realize its fundamental importance in a war-time economy. Real progress, however, will await the day that its study is required of all youth of school and college age.

EDITORIAL NOTES AND NEWS

DR. LANGDON WHITE and DR. JOHN H. GARLAND of the Department of Geology and Geography, Western Reserve University, are giving a series of ten one-half hour broadcasts on station WHK, Cleveland. The topic for the series is "The Geography of Conflict," and may be heard on Saturday at 6:05 P.M., E.W.T. Dr. White is also serving as Director of the Cleveland Council on Inter-American Affairs. This year's program of the Council is directed toward a better understanding of Latin America. To accomplish this end, the Council sponsors a series of lectures, publishes a monthly four-page bulletin, and maintains a speakers bureau. It also cooperates with other organizations, such as the Cleveland Public Library which is featuring a Latin-American Room, as well as maintaining a film library in cooperation with the Office of Coordinator on Inter-American Affairs. Another of the Council's projects is to help promote the teaching of Spanish by radio. Together with the Cleveland Museum of Art an exhibit of western hemisphere contemporary art was recently presented to the public.

According to a release from the United States Department of the Interior, lignite production in 1941 totaled 2,775,832 net tons exclusive of that produced by some small mines. North Dakota produced 83 per cent of the total, followed by Texas, South Dakota, and Montana.

Our largest supply of balata now comes from Northern Brazil. South and Central American countries sent us nearly a million and half pounds in 1940, Brazil contributing 61 per cent. Not elastic like rubber, but flexible, strong, and water-resistant, it can substitute for rubber in a number of capacities. If a mature tree—often a hundred feet high—is tapped every second or third year, it will exude a gum which, when dried, will yield about five pounds of balata.

GEOGRAPHICAL PUBLICATIONS

John Lyon Rich. **The Face of South America, An Aerial Traverse.** 319 pp. Photographs and maps. American Geographical Society, Special Publication No. 26, New York, 1942. **$4.00.**

This book is a field report of a flight along the skyway that nearly encircles South America. The route follows the east coast from Trinidad to Buenos Aires, from there across the Pampas of Argentina and the Andes to Santiago, and then along the west coast to Panama, with a side trip to Bogota. On the air traverse nearly one thousand pictures were taken thru the glass of the plane window and notes were made to record the accurate location of photographs of significant and characteristic cultural and natural features along the line of flight. This report contains more than three hundred of these photographs with a well written text which explains aspects of the vegetation, the topographic features, and the man-made patterns appearing in the pictures. The flight maps included help to orient the reader.

The book is primarily a record of air pictures deliberately made and selected to show the constantly changing landscape which the air traveler meets. There is no doubt that these views are very different from those of the observer on land. Therefore, the reader has a rather difficult problem interpreting the landscapes shown. Since a great many of the pictures are high altitude shots, without the aid of the captions and text it is doubtful if many of the pictures would have much meaning to those inexperienced in reading this type of air view. This is especially true of those pictures depicting agricultural land use. For this reason, one would wish for an arrangement that would bring picture, text, and map closer.

There is no doubt that this collection of air views is a valuable contribution to the field of South American geography. It gives the student a splendid opportunity to learn how to distinguish and to compare varying patterns and to visualize different types of landscapes.

EDNA E. EISEN

Kent State University

Strausz-Hupé, Robert. **Geopolitics.** 264 pp. 7 maps. G. P. Putnam's Sons, New York. 1942. **$2.75.**

This is the clearest of volumes exposing the content of geopolitics. The book is divided in two sections; a learned and non-partisan history of the idea of geopolitics, and, secondly, the author's contribution to geography in political science. Contrary to most discussions of geopolitics, especially the German, the historical exposition is most readable. The second portion is an excellent critique of the idea.

There is a school of thought—and some volumes in this country which oppose the idea of geopolitics. Indeed, your reviewer finds geopolitics a practice without humanity. Whittlesey in German Strategy in the World Conquest speaks of geopolitics as a framework for ideas of political science used to guide aggressive national ambitions. I do not see that the school that condemns geopolitics negates Strausz-Hupé's book. Geopolitics actually is one of the theories upon which the Germans planned the war. As such it should be studied and this volume, I repeat, is the most pleasant and yet realistic fashion in which to learn of this unpleasant realism. Perhaps what Strausz-Hupé fails to do is to emphasize that the ugly motivation of the theory dates with Haushofer, and that Kjellen (pronounced Shellen) and Mackinder were academic rather than malicious. It remained for other authors, particularly Whittlesey, to show that geopolitics gained strength because of the state of the German mind.

This volume is a "must" for every geographer.

RODERICK PEATTIE

Ohio State University